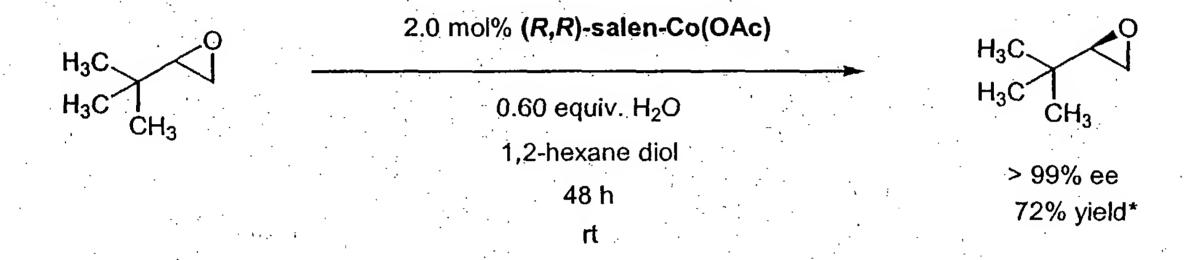
Figure 1

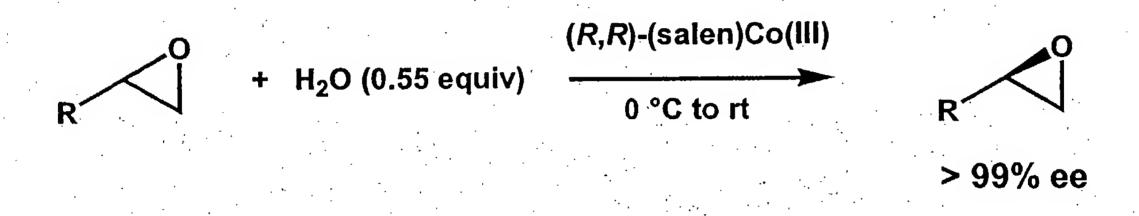
HKR of tert-Butylethyleneoxide



* Yield is expressed as a percentage of the theoretical maximum of 50%

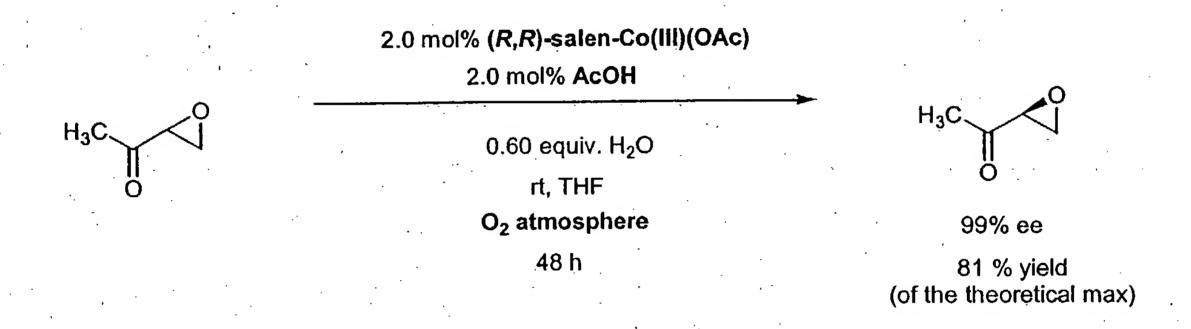
Figure 2

HKR of Alkyl-Substituted Terminal Epoxides



R	Catalyst (mole %)	Yield (% of theoretical)	
Me	0.2	94	
<i>n-</i> Bu	0.2	86	
n-C ₁₂ H ₂₅	0.5	86	
CH ₂ =CH(CH ₂) ₂	0.5	85	
cyclohexyl	0.5	87	
PhCH ₂	0.5	92	

HKR of 3,4-Epoxy-2-butanone



- without O2, the catalyst reduces out in 6 h with recovered epoxide in 76% ee
- preoxidation of catalyst is required

Figure 4

Hydrolytic Kinetic Resolution of Terminal Epoxides

(±)-
$$R$$

$$0.5 \text{ mol% } (R,R)\text{-salen-Co}$$

$$2.0 \text{ mol% AcOH}$$

$$THF$$

$$0.55 \text{ equiv. H}_2O$$

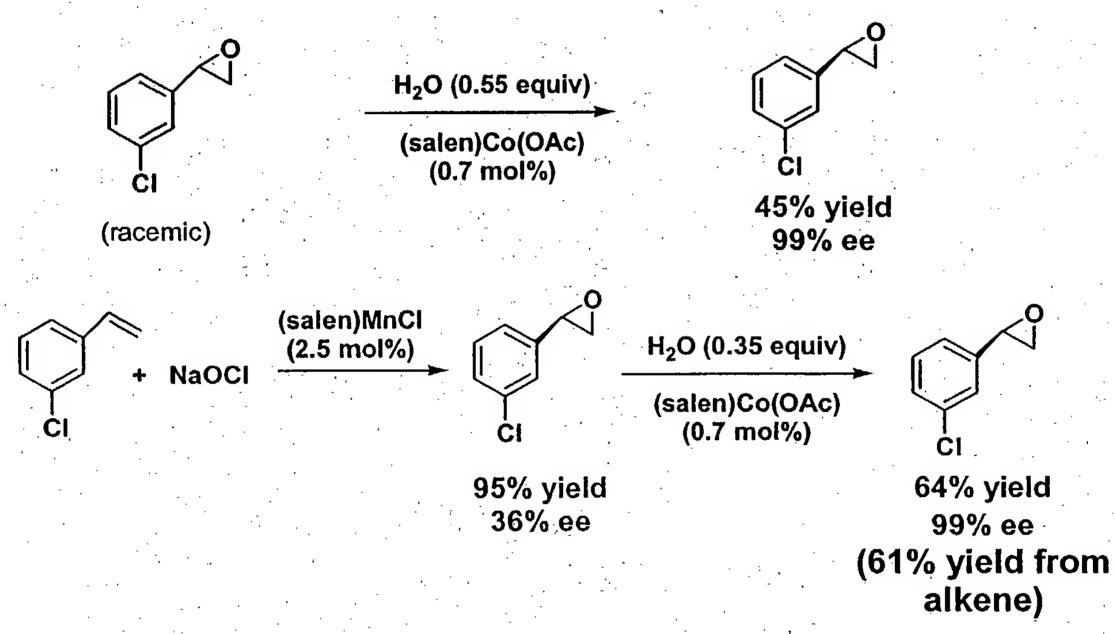
$$0 \text{ °C to rt}$$

	% ee (%yield)		% ee (%yield)
BnO	>99 (93)	EtO	>99 (92)
TBSO	>99 (96)	PhO	>99 (94)
H_3C	>99 (90)		>99 (80)

^{*} Yields reported as a theoretical maximum of 50%

Figure 5

Kinetic Resolution of m-Chlorostyrene Oxide



Brandes Tetrahedron: Asymm 1997, 8, 3927